CLAIMS

1. Method of cooling an at most partially solidified molten metal during fractional crystallisation wherein metal crystals formed have a purer composition than that of the molten metal characterised in that salt in solid form is used to cool the at most partially solidified molten metal.

2. Method according to claim 1, wherein a salt is chosen that melts at least partially during the cooling of the at most partially solidified molten metal.

3. Method according to any one of the preceding claims, wherein at least some of the salt is removed once it is molten.

4. Method according to claim 3 wherein the removed salt is cooled and solidified, preferably for re-use.

5. Method according to any one of the preceding claims, wherein the solid salt is added from above and/or to below and/or into the at most partially solidified molten metal.

6. Method according to any one of the preceding claims, wherein the at most partially solidified molten metal is stirred.

7. Method according to claim 6, wherein the solid salt is added to a vortex formed on the surface of the at most partially solidified molten metal by the motion of the stirrer.

8. Method according to claim 6, wherein the at most partially solidified molten metal is stirred by a means for stirring and solid salt is added into the at most partially solidified molten metal through the means for stirring.

9. Method according to any one of the preceding claims, wherein the solid salt is chosen to have a lower density once molten than that of the at most partially solidified molten metal.

10. Method according to any one of the preceding claims, wherein the solid salt comprises alkaline earth metal halides or alkali metal halides or mixtures thereof.

11. Method according to any one of the preceding claims, wherein the metal is aluminium alloy.